

Attorney Docket No.: WON-0002
Inventors: Kim et al.
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This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of the claims:

Claims 1-32: (canceled)

Claim 33 (new): A method for diagnosing damage to kidneys at an early stage in a subject, comprising the following steps:

- a) providing a urine sample from the subject;
- b) measuring an amount of Transforming growth factor induced gene-h3 (β ig-h3) protein in the urine sample; and
- c) determining if damage to the kidneys is present in the subject, based on the measured amount of β ig-h3 protein of the urine sample being increased as compared to a normal urine sample.

Claim 34 (new): The method as set forth in claim 33, wherein the measuring of β ig-h3 protein in step b) is carried out by an antigen-antibody reaction.

Claim 35 (new): The method as set forth in claim 34, wherein the antigen-antibody reaction is performed by a method selected from the group consisting of immunoblotting, immunoprecipitation, enzyme-linked immunosorbent assay, radioimmunoassay, protein chip, and microarray.

Claim 36 (new): The method as set forth in claim 34, wherein the antigen-antibody reaction comprises the following steps:

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- a) reacting a recombinant protein of β ig-h3 or β ig-h3 fasciclin-1 (fas-1) domain with the urine sample;
- b) adding the reactant from step a) to a matrix coated with the recombinant protein of β ig-h3 or β ig-h3 fas-1 domain;
- c) adding a secondary antibody to the reactant and matrix of step b); and
- d) measuring optical density (OD).

Claim 37 (new): The method as set forth in claim 36 wherein the recombinant protein of β ig-h3 is human β ig-h3 protein (SEQ ID NO: 3) or mouse β ig-h3 protein (SEQ ID NO:5).

Claim 38 (new): The method as set forth in claim 36, wherein the recombinant protein of β ig-h3 fas-1 domain comprises 1 to 10 linked 4th fas-1 domains encoded by SEQ ID NO:6.

Claim 39 (new): The method as set forth in claim 38, wherein the recombinant protein of β ig-h3 fas-1 domain is selected from the group consisting of SEQ ID NO:7, SEQ ID NO:8, SEQ ID NO:9 and SEQ ID NO:10.

Claim 40 (new): A kit for diagnosing damage to kidneys at an early stage, comprising a recombinant protein of β ig-h3 or β ig-h3 fas-1 domain, and an antibody thereof.

Claim 41 (new): The kit as set forth in claim 40, further comprising a buffer solution, a secondary antibody,

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a washing solution, a stop solution or a colorimetric substrate.

Claim 42 (new): The kit as set forth in claim 40, wherein the recombinant protein of β ig-h3 is human β ig-h3 protein (SEQ ID NO:3) or mouse β ig-h3 protein (SEQ ID NO:5).

Claim 43 (new): The kit as set forth in claim 40, wherein the recombinant protein of β ig-h3 fas-1 domain comprises 1 to 10 linked 4th fas-1 domains encoded by SEQ ID NO:6.

Claim 44 (new): The kit as set forth in claim 43, wherein the recombinant protein of β ig-h3 fas-1 domain is selected from the group consisting of sequences represented by SEQ. ID. No 7, No 8, No 9 and No 10.